

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-15. (cancelled)

16. (previously presented) An intravascular catheter comprising an elongate shaft including an inner polymer layer defining a lumen of the elongate shaft, a reinforcement layer disposed about the inner polymer layer, and an outer polymer layer disposed about the reinforcement layer, the reinforcement layer comprising a tubular braid having a first helical member interwoven with a second helical member forming a plurality of crossover points and a plurality of axial members disposed between the first helical member and the second helical member at each of the plurality of crossover points such that the lumen of the elongate shaft and an outer surface of the outer polymer layer are free from radial protrusions.

17. (original) An intravascular catheter as in claim 16, wherein the axial members are uniformly spaced about the circumference of the shaft.

18. (original) An intravascular catheter as in claim 17, wherein four axial members are uniformly spaced apart by 90° about the circumference of the shaft.

19. (original) An intravascular catheter as in claim 17, wherein eight axial members are uniformly spaced apart by 45° about the circumference of the shaft.

20. (original) An intravascular catheter as in claim 16, wherein the elongate shaft includes a proximal portion and a distal portion, and wherein the distal shaft portion has fewer axial members than the proximal shaft portion.

21. (cancelled)

22. (original) An intravascular catheter as in claim 16, wherein the first and second helical members each comprise polymeric material.

23. (original) An intravascular catheter as in claim 22, wherein the first and second helical members each comprise a plurality of monofilaments.

24. (original) An intravascular catheter as in claim 16, wherein the axial members each comprise a polymeric material.

25. (original) An intravascular catheter as in claim 24, wherein the axial members each comprise a plurality of polymeric monofilaments.

26. (original) An intravascular catheter as in claim 25, wherein the monofilaments are held together statically.

27. (original) An intravascular catheter as in claim 26, wherein the monofilaments comprise LCP.

28. (original) An intravascular catheter as in claim 27, wherein the monofilaments are arranged side-by-side to collectively define a flat ribbon.

29. (previously presented) A method of making a portion of a shaft of an intravascular catheter, the method comprising the steps of:

providing a carrier including an elongate tube having an inner polymer layer disposed thereon;

braiding a first helical member and a second helical member about the carrier forming a plurality of crossover points such that a plurality of axial members are disposed between the first

and second helical members at each of the plurality of crossover points to form a reinforcement layer that is free of radial protrusions; and
disposing an outer polymer layer over the reinforcement layer.

30. (original) A method of making a portion of a shaft of an intravascular catheter as in claim 29, wherein the axial members are uniformly spaced about the circumference of the shaft.

31. (original) A method of making a portion of a shaft of an intravascular catheter as in claim 30, wherein four axial members are uniformly spaced apart by 90° about the circumference of the shaft.

32. (previously presented) A method of making a portion of a shaft of an intravascular catheter as in claim 30, wherein eight axial members are uniformly spaced apart by 45° about the circumference of the shaft.

33. (previously presented) An intravascular catheter comprising an elongate shaft having an inner polymer layer, a reinforcement layer disposed about the inner polymer layer, and an outer polymer layer disposed about the reinforcement layer, the reinforcement layer comprising a tubular braid having a first helical member interwoven with a second helical member forming a plurality of crossover points and one or more axially extending members disposed between the first helical member and the second helical member so that the reinforcement layer is free of crossover points having the first helical member and the second helical member both inside of the one or more axially extending members or both outside of the one or more axially extending members such that the reinforcement layer is free of radial protrusions caused by the one or more axial members.

34. (cancelled)

35. (previously presented) An intravascular catheter as in claim 33, wherein at each crossover point one of the helical members passes over a given axial member while the other helical member passes under that axial member.

36. (previously presented) An intravascular catheter as in claim 16, wherein at each crossover point one of the helical members passes over a given axial member while the other helical member passes under that axial member.